DOCUMENT RESUME

ED 470 270 UD 035 339

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| AUTHOR | Liu, Meredith; Russell, Victoria; Chaplin, Duncan; Raphael, Jacqueline; Fu, Helen; Anthony, Emily |
| TITLE | Using Technology To Improve Academic Achievement in Out-of-School-Time Programs in Washington, D.C. |
| INSTITUTION | Urban Inst., Washington, DC. |
| SPONS AGENCY | Department of Education, Washington, DC. |
| PUB DATE | 2002-10-04 |
| NOTE | 44p.; Prepared with assistance from David Perry and Dulari Tahbildar. |
| AVAILABLE FROM | Urban Institute, 2100 M Street, N.W., Washington, DC 20037-1207. Tel: 202-833-7200; Fax: 202-429-0687; Web site: http://www.urban.org. |
| PUB TYPE | Reports - Descriptive (141) |
| EDRS PRICE | EDRS Price MF01/PC02 Plus Postage. |
| DESCRIPTORS | *Academic Achievement; *Computer Uses in Education; *Educational Technology; High Risk Students; Middle School Students; Middle Schools; Program Effectiveness; Summer Programs; Teaching Methods; Urban Schools |
| IDENTIFIERS | *District of Columbia Public Schools |

ABSTRACT

This paper describes implementation of the federal government's DC 21st Century Community Learning Center (DC 21st CCLC) program during the summer of 2001, focusing on the use of computer technology to improve academic achievement. The DC 21st CCLC program provides funding to schools in the District of Columbia to improve their out-of-school-time programs, thus enhancing students' academic success and later employment outcomes. Activities in the 2001 summer programs involved reading and mathematics software programs. Researchers collected data on middle and junior high school students via direct observations of activities, document reviews, interviews with program coordinators and facilitators, and focus groups with student participants. Results revealed that the technology appeared to have been well implemented, with large numbers of well-functioning machines in almost all observed classrooms and generally positive reactions from staff and students. Students tended to be well-behaved and engaged, though they did not appear excited or motivated by their achievement. Student enrollment was somewhat lower than hoped. Observation data suggested that use of the Internet, pretests, and aides could be improved to better support student achievement. Three appendices provide tables, reading and math software, and protocols for site visits. (Contains 13 references.) (SM)

# Using Technology to Improve Academic Achievement in Out-of-School-Time Programs in Washington, D.C.

by

Meredith Liu, Victoria Russell, Duncan Chaplin, Jacqueline Raphael, Helen Fu, and Emily Anthony

October 4th, 2002

The Urban Institute
2100 M Street, NW
Washington, DC 20037-1207

This report was prepared for DC Agenda with assistance from David Perry and Dulari Tahbildar. We also gratefully acknowledge the assistance of the Evaluation Group for the DC 21st Century Community Learning Center program, including Howard Brown and Saundra Handy of the DC Public Schools; Connie Spinner of the DC State Department of Education; Keith Watson of the DC Youth Investment Trust Corporation; Carrie Thornhill of DC Agenda; Eric Bruns of Johns Hopkins University School of Public Health; Barbara Kamara of the DC Office of Early Childhood Development; Cynthia Belton of the University of the District of Columbia; and Janet Reingold of Reingold Associates. Funding for this work was provided by the U.S. Department of Education through the DC Public Schools and DC Agenda.

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**Abstract**

This report describes implementation of the DC 21st Century Community Learning Center (DC 21st CCLC) program during the summer of 2001, with a particular focus on the use of computer technology to improve academic achievement. The report is based on direct observations of activities, document reviews, interviews with program coordinators and facilitators, and focus groups with student participants. The investigation revealed that the technology appears to have been well implemented, with large numbers of well-functioning machines in almost all observed classrooms and generally positive reactions from staff and students. Student enrollment is somewhat lower than hoped, and observations suggest that the use of the Internet, pretests, and aides could be improved to better support student achievement.

## Introduction

A great number of education reforms in recent years have been aimed at improving students' academic skills. The lack of concurrent improvement in standardized test scores, both nationally and in Washington, D.C.,[1] suggests that these reforms may not be working as well as hoped. Many educators are turning to out-of-school-time activities as a possible area where additional gains can be achieved. A particularly striking example is the federal government's 21st Century Community Learning Center program, which provides funds to schools nationwide to improve their out-of-school-time programs. The program was started in 1998 with an annual budget of about $40 million. Funding has increased dramatically since then, to around $850 million for fiscal year 2001.

At the same time that interest in out-of-school-time programming is growing, there is also increased interest in using technology, especially computers, to improve academic achievement. The E-Rate program, which helps fund Internet access and related equipment and services for schools and libraries nationwide, is currently funded at around $2 billion per year nationwide and $5-$10 million per year in DC[2] and E-Rate is only one of many federal, state, and local initiatives designed to increase the use of technology in our schools (Puma, Chaplin, and Pape 2000).

Youth in the District of Columbia face many challenges in terms of both academic success and later employment outcomes (Chaplin et al. 1999). DC Public School (DCPS)

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[1] College Board (2000) and *Washington Post*, August 29, 2001, pp. A1 and A20. The lack of improvement in test scores in Washington, D.C. may be related to an increase in poverty during the 1990's (Rubin, 2002).

system staff, like many of their counterparts nationwide, are working hard to improve their out-of-school-time programs and bring technology into the educational system. The DC 21st Century Community Learning Center program (DC 21st CCLC) is one example of these efforts as it provides enhanced out-of-school-time activities for youth in 10 middle and junior high schools in Washington, D.C. The program, which ran from the fall of 1999 through the summer of 2002, was supported in part by a three-year, $4.1 million grant from the U.S. Department of Education (DOE).

DC 21st CCLC focuses on nonacademic out-of-school-time activities,[3] but the DOE funds are also used to purchase computers and software that can be used during the regular school day to improve academic achievement. In this report, we focus on how technology was used to improve academic achievement in the DC 21st CCLC program during the summer of 2001.[4] A companion report (Russell et al, 2002) describes non-academic components of the program and other related issues.

During the summer, DCPS staff operate both a summer school and a nonacademic out-of-school-time program. Programs for all 10 DC 21st CCLC schools were in operation from June 25 to August 3, 2001, at 8 of the 10 schools where DC 21st CCLC operates during the

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2 DC schools received almost $5 million in Erate funds in 1998, over $50 per student, and most of this was for the public school system. DC was awarded another 9 million in 1999.
3 The DC 21st CCLC program has four components: (1) after-school activities during the school year, (2) a summer program, (3) an intergenerational program, and (4) an adult activities program. This report focuses on the summer program. Two of our earlier reports covered the first two components of the program (Raphael and Chaplin 2000a, b). Currently, there is no plan to evaluate the other two components.
4 Most of the funding for these nonacademic activities paid for facilitator salaries and came from the Temporary Assistance for Needy Families (TANF) block grant rather than DC 21st CCLC funds. The salary of the school-level director of the morning activities was also from the TANF funds.

school year. Students from the remaining two schools were allowed to attend at one of the sites that was open.

The summer school was in the morning and the nonacademic program in the afternoon. Many students had to attend the summer school, and all students from the participating schools (and some others) were allowed to attend either the morning or afternoon sessions. DC 21st CCLC funds paid for the school-level coordinator of the out-of-school-time program and for equipment, including many of the computers and much of the software used in the morning. In addition, the DC 21st CCLC director hired the facilitators who administered the computer-driven academic activities during the morning summer school.[5] Thus, DC 21st CCLC played a large role in how technology was used to improve academic achievement during the DCPS summer school program.

This report begins with a general description of the technology components of the DC 21st CCLC program, followed by a discussion of its most promising strengths and problematic issues. We then make additional observations and summarize the results.

This report is based on data collected in the following ways:

- A review of school site proposals.
- A review of monitoring reports submitted by the DC 21st CCLC program director.
- Observations of 17 academically focused technology activities (morning).[6]
- Interviews with 16 facilitators/instructors of these activities.
- Focus groups with students participating in these activities at 7 sites.[7]
- Observations of 31 nonacademic activities, including sports, arts, community service, and technology (afternoon).

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[5] A number of non-computer academic activities take place during the morning summer school program and are not covered in this report.
[6] Appendix C contains copies of the protocols and survey instruments we used to collect our data.
[7] Scheduling problems precluded conducting a student focus group at the 8th site.

- Interviews with 10 assistant principals (APs, or program managers) of the nonacademic activities.

### Delivery of Activities

The following section describes the delivery of activities, providing information on equipment used, population served, and activities implemented. It details the common trends in program execution as well as the diversity that existed across sites.

#### General Program

The morning academic program used two computer software programs: ReadProg[8] and MathProg[9] (see Appendix B). All eight sites had both ReadProg and MathProg courses in place. Each site had at least one class that used each type of software; some had multiple classes. ReadProg and MathProg complement other, more traditional (noncomputer) courses and most children attended both the computer-oriented and more traditional classes. The frequency of ReadProg and MathProg classes varied from every day to twice a week. ReadProg sessions ranged from 45 minutes to 1½ hours, with the typical class being about an hour long. MathProg sessions tended to be a little longer, from a minimum of one hour to a maximum of five hours. The average MathProg session lasted about 1½ hours (see Table 1).[10] The students who participated in these activities were in the 6th through 10th grades (Table 2).

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[8] ReadProg is a fictitious name. We have not used the actual name of the program in order to avoid becoming involved in issues related to the marketing of proprietary software.
[9] MathProg is also a fictitious name.
[10] The tables are in Appendix A.

### Setting

The typical activity took place in an average-sized classroom. Computers were set up on desks or individual computer stations that were grouped together in small clusters. Most of the computers were PCs, although a few sites used more recently purchased laptops (Table 1).

### Student Participation

Students gave many different reasons for attending the summer school program, predominantly mentioning poor academic performance (either low grades or low SAT-9 scores), parental requests, and having "nothing better to do." These reasons seemed to explain why students were in the ReadProg program, which is mainly for remedial purposes. The MathProg program is an enrichment program, so students were required to meet testing guidelines before they could be admitted.[11] Ongoing participation in both programs was contingent on good behavior, attendance, and appropriate performance.

### Description of the Activities

In a typical session, students came in from their previous class and sat at one of the computers. The facilitator might give a brief introduction, but usually the students simply logged into their accounts and started working. The entire session was spent doing exercises, reading lessons, taking tests, and pursuing other activities dictated by the software. The students worked independently, speaking occasionally with the facilitator when a question arose. At the end of

[11] The tests that were used differed across sites; they included the SAT-9, the Iowa Test of Basic Skills, and pretests specifically for MathProg eligibility.

the session, the students logged out of their accounts and headed off to their next activity for the morning.

## Promising Components

Overall, staff and students saw the ReadProg and MathProg programs in a very positive light. This section details the components of the program that appear to be most promising.

### Resources

Generally, sites were equipped with sufficient resources, including dedicated staff and high-quality hardware and software.

#### *Staff*

The quality of adult supervision was quite impressive. Classes tended to be very reasonably sized. The size of the ReadProg classes varied widely, from 3 to 20 students (Table 1). The average number of students was about 14. The MathProg classes were somewhat smaller, averaging around 8 students, although the range was from 3 to 18. Many of the larger classes also had aides or classroom teachers, so the average student-to-facilitator ratio was around six to one (Table 2).

Because the goal of the technology component was to increase student familiarity with computer technology, it was interesting that a significant number of the facilitators lacked knowledge of common computer packages such as the Microsoft Office applications, and only a few considered themselves to be computer experts. One expressed a "reluctance to moving away from traditional classroom methods," and two felt inadequately prepared in terms of technology training. Nevertheless, all the facilitators felt comfortable teaching the programs they were using with the students, probably in large part because they had received training in those programs. Many of the instructors use the ReadProg software during the year and therefore had received previous training. Newer ReadProg and MathProg instructors, as well as some of the experienced ReadProg staff, had received training just before the program started. This training varied greatly in duration and activities, from daylong sessions to simply running the MathProg tutorial. In addition to technical training, most facilitators teach in DCPS during the school year and felt comfortable with the academic material for which they were responsible.

Facilitators appeared to be effective in both assisting their students with academics and monitoring their behavior. Most facilitators were observed circulating in the classrooms to check student progress and help students who had questions or concerns. Students seemed very comfortable asking facilitators for help and seemed satisfied with the assistance they received. A few facilitators seemed especially helpful, telling their students not to get frustrated, joking with them, patting them on the back, and giving positive feedback.

All facilitators identified goals for their students, although these goals varied greatly in both topic and specificity. Most facilitators focused on the intermediate goal of program progression and the ultimate goal of skill improvement/increased knowledge. In terms of program progression, ReadProg facilitators had varying expectations, including advancement to a specific reading comprehension level and completion of the entire program. In MathProg, most of the facilitators had goals for advancement to higher levels of math (prealgebra/algebra).[12] Nearly half of the ReadProg facilitators said they hoped for some improvement in reading level (one specifically wanted a one-level increase, while another wanted a two-level increase); five of the seven MathProg facilitators wanted students to either gain more pertinent knowledge or enhance existing skills. Additional aspirations included SAT-9 improvement, grade level advancement, improved computer literacy, and increased confidence.

The majority of the facilitators said that they communicated progress to their students, most commonly through the use of progress charts posted in each classroom. Some of the facilitators also mentioned using e-mail and one-on-one conversation. Most of the facilitators also used a rewards system, although in some cases they appeared to be giving away gifts unconditionally rather than as an incentive for good behavior. One particularly generous teacher planned to give the student who made the most progress a graphing calculator at the end of the summer. Another facilitator commented that she instituted a reward system after seeing that "the kids needed more motivation than the stars on the wall." Typical rewards included food, coupons, money, movie passes, and CDs. It seemed that most facilitators were paying for these material rewards themselves. Both the ReadProg and MathProg software generate certificates for mastering certain skills or topics. These printable certificates were used in many of the classrooms for additional positive reinforcement. Most facilitators had some way to measure the achievement of the goals they set. Seven of the sixteen said they used some sort of pre-/post-testing to measure progress. Most of the facilitators did not specify the nature of these tests, although one creative MathProg instructor said that she let the students take the final exam as a

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[12] For some, it was unclear whether they were referring to advancement in school or advancement through

pretest and used it again as a posttest at the end of the program. Over half of the facilitators said they used features of the software to measure progress. ReadProg facilitators used the progress charts and the "Results Room," while MathProg instructors used the built-in tests. Other measures include SAT-9 scores, passing the summer school course, personal communication, and homework checks.

*Physical Resources*

The quality and quantity of equipment and facilities were excellent. Each activity took place in a classroom that was clean, well-lit, and spacious. Most sites had air-conditioning, although three did not, and heat was a problem in at least one of these. In every observed activity, each child had access to his or her own computer, and most classrooms had many more computers than students. The average was eight computers per student, and the minimum was one per student (Table 1). The computers may be used at a higher rate during the regular school year. All but one of the classrooms had Internet access.[13]

All but one of the facilitators said they had access to skilled technical assistance,[14] but satisfaction with the assistance varied by site. One facilitator complained about having problems with some of the computers that were not addressed for more than two weeks.[15] On the other hand, another facilitator said that when the power went out one day, "it seemed like they were here in seconds." Overall, it seemed that technical assistance was available and was satisfactory.

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the program.
[13] In this classroom, students were using a version of ReadProg that does not require Internet access.
[14] The remaining facilitator did not comment on this issue.
[15] It seemed that this facilitator was able to conduct the designated activities despite this issue.

And even though at least some computers were not functioning at most sites, there were generally far more *functioning* computers than students in the classrooms we observed.

*Software*

On the whole, facilitators were very pleased with both ReadProg and MathProg. One satisfied MathProg facilitator noted, "It teaches almost everything I would have done by hand," while another commented, "I've looked at many algebra books in my time, and this is great." Some ReadProg facilitators were similarly pleased, one going so far as to call the program "phenomenal." MathProg facilitators enjoyed the immediate feedback of the program, ease of checking progress, self-explanatory nature, extensive practice, good homework, and the fact that it requires a low level of supervision. ReadProg facilitators liked the ease of use, immediate feedback, options for checking progress and adjusting skill levels, pre- and posttests, and the fact that the program motivates and interests students.

All but one of the facilitators were satisfied with the way the software accommodated students of different skill levels. The dissenting party felt that when students are at different skill levels, "that's where the technology stops and the teacher has to step in." However, most agreed with one ReadProg instructor, who remarked, "Students can go at their own pace, so we don't have the problem of the advanced kids being held up by the slower learners." Many facilitators of both programs especially liked the fact that the software was self-paced and that it was easy to determine when students encountered difficulties. Some MathProg facilitators were also pleased that students could test themselves on their own when they were ready.

Both MathProg and ReadProg have impressive management capabilities that nearly all facilitators used in some way, either daily or every few days. The most common use was to check progress or update the progress charts—more than half of the facilitators mentioned this capability. Two facilitators said they used the ReadProg capability for customizing each student's program, and one MathProg teacher said he spent one to two hours after every class checking up on the students.

**Student Behavior**

*Discipline*

In general, students exhibited commendable behavior. Facilitators kept the rooms quiet and orderly through active supervision. There were very few incidences of inappropriate behavior, and most were addressed quickly and effectively. There were no cases of students being removed from the activities or of any other major disciplinary action. The mild behavioral problems mainly involved students talking or getting out of their seats.

*Engagement*

Most students exhibited a high level of engagement in both ReadProg and MathProg sessions. Students were actively engaged throughout the sessions: working diligently on the matching exercises in ReadProg or reading notes and solving homework problems in MathProg. On average, 93 percent of the students in both ReadProg and MathProg classes were judged as being very or somewhat engaged in their activities. The level of engagement varied widely across the classes, but all students in one-quarter of the activities were judged very engaged.

## Problematic Components

While the DC 21st CCLC program was successful in many ways, some problems were observed that suggest cause for concern. By bringing these issues to the attention of DCPS staff, we hope to generate a dialogue that may help to enhance the quality of program implementation.

### Student Involvement

*Student Interest*

Although the overall level of engagement was high, the level of interest and enjoyment of the activities was less impressive for some students. While students using ReadProg seemed to be generally engaged—in the sense that they were actively working—they did not seem to be especially attracted to the program. In some focus groups, students strongly disliked ReadProg, asserting that it was "stupid," "boring," and "pointless." A facilitator remarked, "One negative that I found—some students, when they get to a certain point, I hear complaints that it's boring. It's hard to keep them motivated when they get to that point." Some students found the program frustrating, especially in its repetitive nature. Many of the students in one focus group complained that ReadProg takes too long, because the activities have to be repeated until students can perform them with a consistent speed and accuracy. A boy in this group said that he did one activity 25 times. Two of the facilitators agreed that the repetition made it hard for the students to stay motivated. One facilitator further elaborated that this issue, as well as the excessive number of exercises, were program flaws. That same facilitator thought the students should have more choice over the activities in order to curb boredom. Despite the disinterest and frustration of some individuals, many others liked the program and found it interesting.

There was some dissatisfaction with MathProg as well. Some students wished the program had been more challenging and exciting. One if those who found it extremely boring said it felt like "math takes forever." Some students suggested adding games to improve the program. One group said that they preferred another program.

While some students were turned off by MathProg, others exhibited remarkable interest in the program. One facilitator explained this by saying, "This is an enrichment class. Kids choose to be here."

*Motivation*

There was little evidence that most students were either excited about or motivated by their progress. Students generally did want their certificates of progress, and in a couple of cases students were observed checking their progress charts or showing some excitement about getting certificates. Overall, however, there was little evidence that students understood or cared about their progress. However, several facilitators strongly felt that the students were motivated by their own progress; one said, "They will remember their test scores. One of the students got 100 percent. It's nice to see the excitement."

*Decrease in Engagement Over Time*

While the overall levels of engagement were impressive, in some of the classes we observed, engagement decreased during the class period. Notably, in one MathProg classroom, all the students started out working well, but by the end of the 80-minute period, over half had stopped working completely. A ReadProg facilitator said, "They start off well, but they get a little antsy."

At sites with unengaged students, few efforts were made to reengage them, and those that were made had little success. Such efforts were deemed unnecessary in many cases, as students were seldom doing more than taking a minute to daydream between activities before getting back to work. However, there were other, more serious cases in which students did not become reengaged. In one extreme example, a student stopped his work on MathProg to use the Internet. The facilitator asked the boy to return to his work, but when the boy resisted, the facilitator stopped trying, saying only, "This is the last time I'm going to let you do this."

*Illicit Internet Use*

When students were not actively engaged, they frequently chose to surf the Web. One-third of the facilitators identified the forbidden use of the Internet as a concern. One particularly adamant facilitator detailed the problem: "We're dealing with younger students who are easily distracted, and some of them have learned to minimize windows so they can be on the Internet, and then minimize the Internet window whenever I walk by." This teacher's recommendation for improving the program was a "closed shop" for the Internet, which would allow students access only to the MathProg site. The problems were confirmed in our observations: We observed illicit Internet use at nearly half of the sites. While there was some feeling among both students and facilitators that the level of Internet use was "discouraged, depending on the teacher," it seemed difficult for many facilitators to act. Most often, students were seen minimizing the Internet window when an adult walked by, a practice that many students admitted to in the focus groups. In one class, students took advantage of an opportunity to surf the Web when the teacher was helping another student.

In addition to the issue of general Internet use, some sites experienced further problems with the content of the sites being accessed. Two facilitators learned of students accessing pornographic sites by reviewing the histories on their computers, and our own observations at a few sites corroborated this. Only four facilitators knew of the existence of any Internet filters at their sites, and two of them believed that the students could still access inappropriate material. The students did not report visiting any of these web sites but did mention playing games, listening to music, and looking at World Wrestling Federation sites as common activities. One of the focus groups noted that there were some efforts to stop Internet use during activities, mentioning that using the Internet could result in expulsion from the program. This is also a problem that has received a great deal of attention nationally (National Research Council and Institute of Medicine, 2001).

While illicit Internet use was a problem at many sites, half of the facilitators allowed their students some time on the Internet, usually 5 to 15 minutes at the end of the class. Most of this use was directly linked to either performance (completing a certain number of exercises) or effort (working well for the day), or simply as a break.

*Low Attendance and Enrollment*

Using computers to improve academic achievement is expected to increase student interest, motivation, and engagement. One might also hope that enrollment in these programs would increase as students become aware of the technology options. Unfortunately, the enrollment and attendance numbers suggest that many Washington, D.C., youth are not taking advantage of the opportunities available through the DC 21st CCLC program. For instance, as Table 3 shows, less than a quarter of the students enrolled during the school year in these schools attended the summer program in 2001 (The range is 13 percent to 41 percent.)[16] Indeed, the total number attending (920) was lower than the number for the summer of 2000, when almost 1,000 students attended (Raphael 2000b), even though there was one more site open in 2001.[17]

Enrollment and attendance issues impeded implementation, with 6 of the 16 activities reporting such difficulties. Notification that one of the schools would open for the summer was made quite late. Enrollment at that school went from 85 the first week to 160 the second week.[18] In one of the MathProg classes, testing for eligibility did not begin until after the program started. Students who had been recommended by teachers were sent to the facilitator over the course of two weeks and did not begin working on MathProg or ReadProg until after they had been tested. There were also a variety of scheduling problems, including missing rosters and lack of coordination with other summer school activities. In addition to hampering the initial implementation of the program, some problems were not resolved weeks later. On one site visit, the six students for the facilitator's first class never arrived, and the facilitator did not know why. Other attendance issues were experienced as well. There was some sporadic

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[16] These are approximate estimates, as some students attended programs at other schools.
[17] This comparison is complicated by the fact that some primary school students were included in these attendance numbers, and the number of primary schools with their own programs may have changed during this period. Further discussions of enrollment are included in Appendix B of the companion report, Russell et al (2002).
[18] We were also told that all schools experienced a large increase in enrollment during the first week, because many students had not been told that they had to attend summer school, which was mandatory for those who scored poorly on the SAT-9 (the standardized test given to all DCPS students).

attendance resulting from hot weather, and some students who had to walk to school were late. Two teachers said that attendance dropped over time as students started summer jobs, camps, and vacations. Another facilitator, who had been given very short notice about her position, was sure that the enrollment would have been higher if there had been more advertising for the program. Many facilitators commented on the extent to which attendance affected success. A ReadProg facilitator said, "Those who come on a regular basis are on schedule, but those who are not coming regularly are not achieving the goals set forth for them."

### Other Issues

*Lack of Individualized Treatment*

A major benefit of using these software packages, and one that many facilitators mentioned, was that they could customize the program for each student. However, for both ReadProg and MathProg, everyone seemed to begin at the first level, even though students spanned a four-year grade range and in spite of the fact that pretests were given to all the ReadProg students. The facilitators' responses to starting all students at the initial level were mixed. Some thought that it was easier to see progress and identify appropriate skill levels if the students worked up to where they started to struggle. Others thought that students should be placed in different skill levels by pretesting.

Starting everyone at the beginning of a program could affect both student interest and their gains in knowledge and skills. Particularly striking is the fact that MathProg is supposed to be an enrichment program, yet students were starting from basic math. Thus, many students and facilitators said that the program was mainly a review of previous material. One facilitator had students who "went straight to the tests—no lessons—passed and moved on," which indicates that these students already knew the material. Some students said they found the MathProg program boring and wished it were more challenging.

A common concern with ReadProg was that it is too basic for middle school students, which can make the activities both ineffective and boring. One facilitator said, "There's something that needs to be added to it for students who don't need remediation. For elementary students it would suffice, but for middle school students something else needs to be added that's a little more challenging." Many of the students also felt that ReadProg was too easy, some speaking with great disdain of the "baby words" they were given. It is unclear whether these problems are attributable to having all students start at the beginning, because the more able students should have been able to progress through the basic materials fairly quickly.

Another problem with ReadProg is that students do not get to reading comprehension activities until they have they have completed many exercises dealing with subskills and phonemics. Judging from observation, very few students make it to the reading comprehension activities, and nearly half of the facilitators wished that their students had been able to spend more time working through those activities. In fact, two facilitators said that students should be filtered into the reading comprehension activities. Some facilitators identified this as a software flaw, but our observations suggest that facilitators could have started the students at different levels. On the other hand, it is possible that students would feel they were being treated unfairly if they were started at different levels.

*Lack of Support from Aides*

While the quality of the facilitators was generally excellent, there were some problems with aides. In nine of the activities (eight were ReadProg programs), additional adults were present. These other adults were mostly classroom teachers or hall monitors who work during the school year. Also, two classes had interns from George Washington University as aides. In nearly half of these classes, these other adults were very effective in their roles, performing tasks similar to those of the main facilitator. In the remaining classes, however, they seemed to have little interaction with the students and were mostly occupied using the computers and looking at papers. Some facilitators believed that they would have benefited from more assistance from these aides. A ReadProg facilitator spoke about one effective classroom teacher: "He wanted to know where they need help, so that in his classroom he can help with that. He knows the computer program and was really eager to learn." But this facilitator noted that "not every facilitator and teacher have this same relationship."

The lack of assistance from classroom teachers may be partially explained by their unfamiliarity with computer activities. One facilitator commented on the lack of technical skills in many of the classroom teachers: "One problem is that not all adults are computer literate. Some older teachers are scared and do not want to work with the computer in front of the kids, because some children may see this as a deficiency." Another facilitator agreed, remarking that if classroom teachers are interested and make an effort to learn the technology, they can be of enormous help.

*MathProg Software*

Although the MathProg software was generally well received, a few concerns surfaced in the observations and facilitator interviews. The first involves the online tests. In the future, the tests will change, but currently they remain exactly the same each time a student takes them. In addition, they use multiple choice answers. In a few classes, the chapter tests were used as pretests, so the students could take them as many times as they wanted. The facilitators believed that this approach allowed students to move at their own pace and avoid review material, but it may also have allowed them to guess at answers until they got them correct instead of working out the answers. On one of the site visits, students taking one of the tests were observed writing down answers and performing very few calculations when they retook the tests. The facilitator said that the students wrote down the answers so they would not lose the information if the computer crashed while they were trying to input them. However, when one student taking the test was questioned, he did not know the meaning of the term "pi," nor did he know the formulas for area and mean, all of which were used in questions he had already answered correctly. Also, a few students complained that they had to take the test too many times before they passed it, perhaps indicating that students were not studying enough before the tests.

Another possible problem with MathProg is that the answers to the homework problems are easily available. They can be viewed by simply scrolling down farther on the same screen as the questions. Although one facilitator liked the fact that the program provided immediate feedback about the problems, he also believed that this might encourage students to cheat. This problem did not appear to be widespread, as only one student was observed copying the answers directly onto his answer sheet without performing any calculations.

One facilitator deemed MathProg appropriate for younger children but below the skill levels of many of the students in the program.

## Other Observations

Though not necessarily harmful or helpful to the program, our study yielded a few additional notable observations.

### Computer Use Outside of Summer School

Questioned in the focus groups, the students seemed to have very little interest in learning new computer activities in the program. One group said that if they wanted to learn things like games or e-mail they could do it on the weekend. Some students mentioned learning typing (one student said that they don't type, they "pluck"). Only a few students mentioned wanting to learn other activities, including playing games, making shapes as part of a math program, downloading pictures, and creating web sites.

This disinterest may be attributable to the fact that most of the students already seemed very comfortable with computers and used them outside of school. An impressive 27 of 33 students asked had access to a computer at home. Those who did not used them at the library, church, and their friends' houses.[19] Many seemed familiar with e-mail and the Internet. Twenty-two of 29 students asked had their own e-mail accounts. A few in each group were familiar with PowerPoint and Excel, and a handful maintained their own Web pages. The frequency of computer use varied but was generally high. Some students said they used computers only 15 minutes a day, but many others said they did so "all the time" or "whenever I get a chance." These patterns are somewhat surprising, given recent evidence of a large "digital divide" by race in access to computers at home. For instance, Newburger (2001) reports that far fewer than half of black and Hispanic children ages 3 through 17 lived in households with computers in August 2000, and fewer than 20 percent of these children used the Internet at home.[20] Since over 90 percent of the students enrolled in the schools we observed were either black or Hispanic, their self-reported computer use suggests that these students may have far more access to computers at home than the average student in these schools.

During the school year, there is variation across schools in terms of academic computer use. Some of the students had used ReadProg during the school year, and students at one site said they had used MathProg. Others said that they had used other academic software packages during the school year. Students at one site specifically mentioned Academy of Math.

**Facilitator Suggestions**

In addition to commenting on existing features of the program, facilitators offered a wide range of suggestions for additions and improvements. Some of the suggestions for MathProg were to add an auditory component, allow students to do problems on the computers (instead of on paper), and provide better examples. ReadProg facilitators recommended a time limit be added for finishing each section, a better reward structure be implemented, and the program be put on disk so that students could work at home.

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[19] Interestingly, none mentioned community centers, though such centers are available in Wards 6, 7, and 8 (Manjarrez et al, 2002).

[20] In comparison, more than two-thirds of white non-Hispanic and Asian children were in homes with computers, and more than one-third used the Internet at home.

## Conclusion

During the summer of 2001, the DC $21^{st}$ Century Community Learning Center program helped provide computers and software designed to improve the academic success of summer school students from 10 junior high and middle schools in Washington, D.C. In addition to helping to reduce the number of youth left idle during the summer, these activities appeared to have the potential to improve student familiarity with computer technology. This last point is important, because "technofluency" is an important skill for the modern labor market (Krueger, 1993).

Our observations suggest that the quality and quantity of equipment were high, as was the overall level of exposure to technology. The staff seemed well prepared and dedicated, and the students were generally engaged. Although the overall program was impressive, challenges remain. Low student enrollment and illicit use of the Internet were two impediments to successful student outcomes that we observed. However, the optimistic and determined attitude of both facilitators and management should help to ensure that program implementation improves over time.

Student outcomes could not be directly measured from the data we collected. Therefore, for future DC $21^{st}$ CCLC programs, we recommend that a carefully designed impact evaluation plan be used. We also strongly suggest continued self-monitoring by DCPS staff. These measures should help improve the program for the benefit of future Washington, D.C., youth.

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## Appendix A: Tables

| Table 1: Equipment for DC 21st CCLC AM Academic Technology Components, Summer 2001 | | | | | | |
|---|---|---|---|---|---|---|
| **Mathematics** | | | | | | |
| **School** | **No. of Computers** | **No. of Students** | **Computers per Student** | **Computer Type** | **Internet (Y/N)** | **Duration of Session** |
| Eliot JHS | 24 | 16 | 1.5 | PC desktop | yes | 1 hr |
| Francis JHS | 48 | 7 | 6.9 | PC desktop | yes | 1.5 hrs |
| Garnet-Patterson MS/Shaw JHS | 30 | 8 | 3.8 | PC desktop | yes | 1-1.5 hrs |
| Kramer MS | 10 | 3 | 3.3 | PC desktop | yes | 55 min |
| MacFarland | 24 | 6 | 4.0 | PC desktop | yes | 5 hrs |
| Sousa MS | 16 | 9 | 1.8 | PC desktop | yes | 2 hrs |
| Sousa MS | 16 | 12 | 1.3 | PC desktop | yes | 2 hrs |
| Terrell JHS | 28 | 7 | 4.0 | Mac, PC desktop | yes | 1 hr 20 min |
| TOTAL for MATH | 196 | 68 | N/A | N/A | N/A | N/A |
| Minimum | 10 | 3 | 1.3 | N/A | N/A | 55 min |
| Maximum | 48 | 16 | 6.9 | N/A | N/A | 5 hrs |
| Average | 25 | 9 | 3.3 | N/A | yes (mode) | 1 hr 42 min |

* No math class was observed for Harris/Hart because the facilitator was gone for the entire week

| Reading | | | | | | |
|---|---|---|---|---|---|---|
| **School** | **No. of Computers** | **No. of Students** | **Computers per Student** | **Computer Type** | **Internet (Y/N)** | **Duration of Session** |
| Eliot JHS | 24 | 14 | 1.7 | PC desktop | yes | 1 hr |
| Francis JHS | 48 | 20 | 2.4 | PC desktop | yes | 1.5 hrs |
| Garnet-Patterson MS/Shaw JHS | 25 | 12 | 2.1 | PC desktop | yes | 45 min |
| Harris Educational Center/Hart MS | 30 | 13 | 2.3 | PC desktop | yes | 1 hr 15 min |
| Harris Educational Center/Hart MS | 30 | 16 | 1.9 | PC desktop | yes | 55 min |
| Kramer MS | 50 | 14 | 3.6 | PC desktop | yes | 55 min |
| MacFarland | 24 | 17 | 1.4 | PC desktop | yes | 1 hr |
| Sousa MS | 20 | 20 | 1.0 | PC wireless laptop | yes | 1 hr |
| Terrell JHS | 25 | 3 | 8.3 | 24 laptop, 1 desktop | no | 45 min |
| TOTAL for READING | 252 | 115 | N/A | N/A | N/A | N/A |
| Minimum | 20 | 3 | 1.0 | N/A | N/A | 45 min |
| Maximum | 50 | 20 | 8.3 | N/A | N/A | 1.5 hrs |
| Average | 32 | 14 | 2.9 | N/A | yes (mode) | 1 hr |

Source: Observations by Urban Institute staff

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| Table 2: Characteristics of DC 21st CCLC AM Academic Technology Programs, Summer 2001 | | | | | |
|---|---|---|---|---|---|
| Mathematics | | | | | |
| School | No. of Facilitators | No. of Aides | No. of Students | Age/Grade of Students | Students/ Facilitator |
| Eliot JHS | 1 | 0 | 16 | grades 6-8 | 16.0 |
| Francis JHS | 2 | 0 | 7 | grades 8-9 | 3.5 |
| Garnet-Patterson MS/Shaw JHS | 1 | 0 | 8 | grades 6-8 | 8.0 |
| Kramer MS | 1 | 0 | 3 | grades 6, 8 | 3.0 |
| MacFarland | 1 | 0 | 6 | grades 6-7 | 6.0 |
| Sousa MS | 1 | 0 | 9 | grade 7 | 9.0 |
| Sousa MS | 1 | 0 | 12 | grade 7 | 12.0 |
| Terrell JHS | 1 | 0 | 7 | grades 6-8 | 7.0 |
| **Total** | **9** | **0** | **68** | **N/A** | **N/A** |
| **Minumum** | **1** | **0** | **3** | **grade 6** | **3.0** |
| **Maximum** | **2** | **0** | **16** | **grade 9** | **16.0** |
| **Average** | **1.1** | **0.0** | **8.5** | **grade 7** | **8.1** |

*No Math class was observed in Harris/Hart because the facilitator was gone for the entire week.

| Reading | | | | | |
|---|---|---|---|---|---|
| School | No. of Facilitators | No. of Aides | No. of Students | Age/Grade of Students | Students/ Facilitator |
| Eliot JHS | 1 | 2 | 14 | older MS | 14.0 |
| Francis JHS | 2 | 2 | 20 | MS | 10.0 |
| Garnet-Patterson MS/Shaw JHS | 2 | 0 | 12 | MS | 6.0 |
| Harris Educational Center/Hart MS | 1 | 2 | 13 | age 13-14 | 13.0 |
| Harris Educational Center/Hart MS | 1 | 1 | 16 | grade 6 | 16.0 |
| Kramer MS | 1 | 0 | 14 | grade 7 | 14.0 |
| MacFarland | 1 | 1 | 17 | grades 6-8 | 17.0 |
| Sousa MS | 1 | 2 | 20 | grades 6-8 | 20.0 |
| Terrell JHS | 1 | 0 | 3 | grades 8-10 | 3.0 |
| **Total** | **11** | **10** | **129** | **N/A** | **N/A** |
| **Minumum** | **1** | **0** | **3** | **grade 6** | **3.0** |
| **Maximum** | **2** | **2** | **20** | **grade 10** | **20.0** |
| **Average** | **1.2** | **1.1** | **14.3** | **grade 7** | **12.6** |

Source: Observations by Urban Institute staff

| Table 3: Students in DC 21st CCLC AM Programs, Summer 2001 | | | | |
|---|---|---|---|---|
| School | AM Enrollment According to Monitoring Reports | AM Attendance | | Ratio of summer attendance to school year enrollment |
| | | Observed by UI staff | Monitoring Reports | |
| Eliot JHS | 79 | 38 | 56-60 | 0.156 |
| Francis JHS | 61-105 | 58 | 49-64 | 0.128 |
| Garnet-Patterson MS/Shaw JHS | 161-229 | 130 | 132-182 | 0.181 |
| Harris Educational Center/Hart MS | 309 | 221 | 148-179 | 0.137 |
| Kramer MS | 62-63 | 60 | 32-45 | 0.163 |
| MacFarland | 298-375 | 221 | 155-302 | 0.415 |
| Sousa MS | 181 | 125 | 111-132 | 0.319 |
| Terrell JHS | 107-164 | 67 | 93-149 | 0.386 |
| TOTAL | 1258-1505 | 920 | 776-1113 | N/A |
| Minumum | 61 | 38 | 32-45 | 0.130 |
| Maximum | 375 | 221 | 155-302 | 0.410 |
| Average | 190 | 115 | 118 | 0.235 |

Sources: DCPS Monitoring reports were written every few days by staff hired by the director of the DC 21st CCLC program. Ranges reflect how schools' student enrollment changed over the summer. Different methods of collection used account for most of the differences across columns. The Urban Institute's numbers are based on one-day visits to the various schools. The last column uses total student enrollment, as found at http://www.dcschoolsearch.com.

## Appendix B: ReadProg and MathProg Software

### ReadProg

ReadProg is a software program intended for reading improvement; it is generally designated for remedial purposes. It focuses on teaching the "component" skills of reading (identification of individual sounds and syllables), in hopes of improving overall fluency. All activities are accompanied by tutorials and practice sessions to guide the student. But while ReadProg allows students to work independently, it requires significant assistance from an instructor to reach its fullest potential.

ReadProg is an interactive program that leads the student through a progression of short lessons that use speech, sound, graphics, and animation. Each lesson involves one of three main activities: word matching, sound matching, or reading comprehension. Word and sound matching are similar activities—the object is to match a target sound or group of letters to one of three choices. In the word matching activity, the target word appears on the screen and the three choices are displayed below it. The student uses the number keys to select a response. In sound matching, the computer speaks the target word and the matching options, then the student uses the mouse both to repeat sounds and to make a final choice. In both matching exercises, the program immediately tells the student whether the answer is correct or not, then moves on to a new group of words or sounds. The students must repeat the matching exercise a certain number of times, then they are given their accuracy and speed results. Students may proceed only after they have completed three exercises at similar speeds and at a target level of accuracy. As students master these exercises, they begin to get more complex. The progression starts from single letters or sounds and moves to complete words. The exercises vary among matching the exact word, the beginning or ending sounds, and rhyming words.

The reading comprehension component encompasses 10 levels of exercises in oral and silent reading. It is designed to improve students' abilities to identify the main idea, understand relationships, make inferences, note specific facts and details, and retain information. In these exercises, the students have unlimited time to read a short selection, then they must answer five multiple-choice questions about what they just read. If any of the questions are answered incorrectly, the student must respond to them again, but this time they are able to view the paragraph.

ReadProg has a variety of built-in capabilities to help both the instructor and the student with the program. It offers tools for customizing the individual student's program, including changing the number of repetitions in a given activity and altering the skill level in the reading comprehension exercises. A function called "Teacher Time" is activated whenever a student is having too much difficulty with an exercise: It freezes the student out of activities until the teacher attends to the problems. Also, for every skill mastered, a virtual award appears in the "Results Room," and the student receives a printable certificate. Additional features include diagnostic tests, automated interpretation and report writing for these tests, a message communication system, and an online library.

**MathProg**

MathProg is an online math training program. Once a teacher registers a class of students, those students can log on individually from any terminal connected to the Internet. Students can work independently through much of the program, but teachers are an integral complement to the technology, monitoring progress and helping students through problem areas.

MathProg provides training in five courses: Basic Math/Pre-Algebra, Elementary Algebra/Algebra I, Intermediate Algebra/Algebra II, Plane Geometry, and Test Prep Course. Each course is broken down into chapters, which are further divided into lessons. Each lesson follows the same basic format; they are composed of text on the topic interspersed with animated and interactive examples. Students can read through lessons at their own pace and refer back to them later as well. Each lesson also contains many relevant homework problems; students do these problems on paper and compare their answers with the answers online. To proceed to the next chapter, the student must take an online multiple-choice test, which is scored immediately by the computer. The teacher sets the computer in advance to determine the percentage correct that will allow the student to move on.

Like ReadProg, MathProg includes a number of management capabilities. Through a single terminal, instructors can access records for all their students, including test scores, grades, and lesson times. They can communicate with students through a built-in message system. The program also allows for some customization, letting facilitators choose the order in which students will progress through the lessons,[21] give students access to solutions, and determine the passing percentage.

[21] In the "closed" format, users must follow a standard progression of lessons; in the "open" format, they can skip around as they wish.

## Appendix C: Protocols for Site Visits

### Session Observation Guide

School: __________________
Activity/Facilitator: ________________
Date: ________

Preliminary Instructions: Please make sure to introduce yourself to the facilitator. Allow him or her to introduce you to the group if it seems best, but try to remain as unobtrusive as possible. Please make sure to answer all the specified questions. If you have time and it seems feasible, you may informally question the students about their activities (suggested questions follow survey).

Time session starts: _____
Duration of session: _____
Time observation starts: ____
Time observation ends: ____
Number of boys: ____
Number of girls: ____
Age/grade range of students: ________
Number of facilitators: ____
Number of aides: ____
Number of computers: ____

Type of computers used (list type and number: PC or Mac, laptop or desktop, wired or wireless, connected to Internet):

Type of software being used (MathProg/ReadProg/word processors/spreadsheets/Internet/e-mail/other):

Initial Information:

1. Describe the setting (room, building, nonschool location, how computers are grouped etc.) for the activities.

2. If you were present at the beginning of the session, how were expectations for the session communicated by the facilitator, if at all? What did you think was the "plan" for the session?

3. Did students seem to know what was expected of them (e.g., did they quickly engage in the activity, ask questions, appear interested)?

Monitoring of Activities

Please note that specific activities will likely change over the course of the session; therefore, it is important to keep a running log. Use the questions below as a guide for what to report. As the specific activities change, please continue to update your responses.

4. Describe the activities, providing details about what materials and manipulatives are used, what the actual activities are, how the activity is being accomplished, time spent explaining the activities, time on each activity, time spent actually using computer, etc.

5. What are the students doing (e.g., practicing typing, surfing the Internet, downloading MP3s)?

6. How are students organized (whole-group, small groups, pairs, working independently)?

7. How are students interacting with one another? Be sure to note examples of collaboration, cooperation, praise, feedback, and shared responsibility for activity.

8. How is the facilitator interacting with students? How are aides interacting with students? Be sure to note facilitation, feedback, co-learning, guiding, and demonstrations.

9. Approximately how many students are engaged in each of the activities at hand? What are the unengaged students doing?

Summary:
10. Describe the noise level. Does it appear to be a problem?

11. How is time spent during the observed period?
Percentage of time working independently: ___
Percentage of time working in small groups: ___
Percentage of time working in pairs: ____
Percentage of time entire group spends listening to facilitator: ___
Percentage of time that students can choose their activities (free time): ___
Other (________________________): ___

12. Do students have the opportunity to take responsibility for any aspects of the activity (e.g., may they choose which programs to use, what information they find on the Web)? Do they do so?

13. What did you perceive as benefits of this activity for students? Please explain, using examples, quotes, description, etc.

14. How interested are students in doing this activity? Are they aware of and motivated by their progress? Please provide examples and support for your assessment.

15. Would you describe this activity as structured, semistructured, or unstructured? Why?

16. How engaged are students in this activity overall?
Percentage of students very engaged:
Percentage of students somewhat engaged: ___
Percentage of students not engaged: ___

17. What are students who are somewhat or not engaged doing (e.g., talking to each other, daydreaming, walking around the room)?

18. Does the facilitator make an effort to reengage students who are not engaged? Do other students make such and effort? How?

19. How would you describe the degree of supervision (e.g., from students actively supervised to neglected)?

20. How is discipline maintained? How effective was the facilitator at managing the students? Please support your assessment.

21. Were any students told to leave the room/area during this activity because of a discipline problem? Explain.

22. Is the space adequate, in your opinion, for this activity? If not, why not?

23. Are there adequate materials for all students (e.g., does every student have a computer, is the same software installed on all of the computers)? Explain.

24. Was the community involved in any way with this activity? Explain.

25. If food was served, please answer the following:
What food was served? How much?
Did it appear fresh?
Did it appear healthy?

26. If parents were involved, please answer the following:
How many parents were involved? ___
What were the parents doing?
Did the parents seem interested in the activity?
Were they interacting with their own children?
Were they interacting with other children?

27. Describe any interesting/relevant occurrences during this activity. Did you observe any trends in use based on gender, age, ability, etc.?

Informal Questioning: If there is time and it seems appropriate, please feel free to ask the students informal questions. The following questions are suggested.

What are you doing? Have you ever used this program before? Do you ever use a computer outside of school? Do you like what you're doing?

Record any particularly interesting/relevant statements made by students or staff:

*Remember to thank the facilitator when you are finished.*

**Facilitator Interview Protocol**

**If this is not a good time to talk, when can we call you to discuss this activity?**

**Telephone number: _______________**

My name is _______, and this is _________. We work at the Urban Institute and are part of the evaluation team for the DC 21st Century Community Learning Center program. We are very happy to meet you and to visit _____ [school name] _______ as part of our evaluation. We want to thank you for taking the time to meet with us and learn more about how the program is being implemented at the school.

The purpose of our interview with you today, which should last about 30 minutes, is to understand the ways in which this program is working, as well as what isn't working as well as anticipated and any lessons you've learned. We will be visiting each of the program's DC sites and asking the same questions of program coordinators and students. *We are not using this information to judge your work or to judge the results of the program.* At this early stage in the program, we're collecting information to be used to better understand program results.

Because we are pursuing information that can benefit the future implementation of the program, we hope that you will feel comfortable talking candidly to us. All the information you provide will be kept anonymous. Any details about your program will be reported using phrases such as "in one program" or "one program coordinator explained that...."

We would like to request your permission to tape the interview. These tapes will be kept confidential; we would just like to have them to check in case we miss anything, and possibly for training purposes. Taping the interview will help us focus better on what you are saying during the interview.

*Do we have your permission to tape the interview?*

*Do you have any questions for us before we begin?*

Today's Activity

1. ***How well do you feel the activity went today? [Observer to ask specific questions based on observation of period, if appropriate.]***

**Activity in General**

2. ***What are your program goals for students? [If they only mention improved test scores:] Are there any other goals?***
3. ***How are these goals measured?***

4. ***How well are your students doing on achieving these goals?***
5. ***Are you doing any other activities to improve [reading comprehension/math skills]?***
6. ***If so, how are these activities coordinated with the [ReadProg/MathProg] activities?***
7. ***Have you been able to implement this activity as planned throughout the summer? Please explain.***
   Probes: Are students participating fully? Are some days or periods more difficult than others? What difficulties or challenges have you encountered in implementing this activity?

Professional Development/Training

8. ***Did you feel adequately prepared for or supported in your role as facilitator of this activity?***

9. ***Were skilled technology coordinators available to you when you needed them?***

10. ***Can you describe any training (or professional development) focusing on technology that you received to support your role in this program?***

What types of software were covered? Was the integration of this software into the program covered? How much training have you received?

11. ***What technology skills do you possess?***

Technology Issues

12. ***What is your impression of the [ReadProg/MathProg] software program?***
13. ***Have you used the program's Web-based management capabilities?*** *What capabilities do you use? How often do you use them?*
14. ***Do you communicate with the students regarding their progress in the software programs? Do you alert the students to their progress? Do you reward them for successes and motivate them to advance?***

15. ***Do the software programs help you deal with students of different skill levels? If so, how?***

16. ***Are the students ever given the opportunity to access the Internet while participating in this activity?*** *[By this we mean websites not related to MathProg and ReadProg.]*

17. ***If so, are you aware of any Internet filtering technology in place that prevents students from viewing inappropriate sites? Is the technology adequate? Are you aware of any problems with this technology, or do you have any concerns about it?***

**General**

18. ***What suggestions do you have for improving this activity in the future?***

Thank the facilitators for participating.

**Student Focus Group Protocol**

**Introduction**

My name is _______, and this is __________. We work at the Urban Institute here in Washington. We are conducting an evaluation of the DC 21st Century Community Learning Center program. We want to thank you for agreeing to meet with us. We are very happy to be at ______[name of school] ______ to talk with you about this summer school program.

We are visiting each of the 10 middle and junior high schools in Washington that have a summer school program like this one. We're speaking to program coordinators and to students. Our discussion with you will last about 30 minutes.

The reason we wanted to talk to you is that you, the students, are what this program is all about. We would like to learn how you feel about this program—what you're getting out of it, what you think is working best, and what isn't working as well. We would also like to ask you about what you think you're learning in the program, and what you would be doing if you weren't here. That sort of thing.

We won't use the information you give us to "grade" the program or to say whether it's good or not, but to understand it better.

We will keep the information you give us anonymous. That means no one, including your teachers and the program coordinator, will know what a particular student says during this discussion. Instead, we will report that "Students at one school said...." or "One female student felt that...." Because we're keeping your responses anonymous, we hope you will tell us honestly how you feel. Your thoughts about the program will be very helpful to everyone involved. We ask that you not talk about what anyone said during this discussion after we are done, so that everyone feels comfortable enough to say what they really feel. Also, this discussion is voluntary—you do not have to respond to any question.

We would also like to request your permission to tape our discussion. We're the only ones who will use these tapes, to catch anything we missed the first time around. Taping the interview will help us focus better on what you are saying right now, but again, no one else will listen to the tapes.

*Do we have your permission to tape this discussion?*

*Do you have any questions for us before we begin?*

**1. You are doing a lot of different things in this program. Can you tell us about some of them?**

Probe: So the program is divided into different parts: _________, _________, ______. Can you talk a little about these parts?

**2. You are also spending some time on computers in this program. Can you tell us about what kinds of things you do on computers?**

Probe: So you spend time on MathProg, ReadProg, other learning activities, and recreational activities on computers. Can you tell us how much time you spend doing each?

Probe: When do you get to do recreational activities on computers? Are there scheduled times for these activities, or are they only available after you have finished your work?

[If only use computers after other work] Probe: How long does it take you to finish your work before you get to play on the computers?

**3. What kinds of things would you like to learn how to do with computers?**

Probe: Would you like to improve your math or reading skills with the computers? Would you like to learn how to type? Would you like to learn how to search the Internet or e-mail friends? Would you like to learn to play computer games?

Probe: What do you already know how to do? Do you search the Internet about interesting topics? Do you e-mail friends?

Probe: How many of you know how to use a word processor?

Probe: How many of you know how to use a spreadsheet application?

**4. Do you use computers outside of school? Do you use the Internet outside of school? Where do you use computers outside of school? Can you use computers at home?**

Probe: How often do you use computers outside of school? How often do you use the Internet outside of school? What do you do when you use computers outside of school?

**5. What kinds of things do you do with other students in the program? What kinds of things do you work on together on the computer?**

Probe: Do you work together on projects? What else do you do? [Ask for examples.]

**6. What kinds of computer activities do you do with your teachers in this program?**

Probe: Do they work individually with you on computers? What else do you do?

**7. Do you do computer activities in this program that you do not do during the regular school year?** [Get examples.]

**8. What caused you to be in this program?**

Probe: Did you choose to get involved? Why? What had you heard about the program? Did your mother or father or someone else decide for you?

**9. Do you feel safe while you're in this program? Do you feel safe in the school building? Do you feel safe getting home?**

**10. What do you think you are learning, or getting out of this program? Can you give examples of what you mean?**

Probe: Have you learned anything new? Do you feel different? Do you do anything differently, or not do something you used to do?

**11. Are there any rules that affect whether or not you can be in this program?**

Probe: Do your regular school teachers, or anyone else, decide whether you can be in this program?

**12. What do you do in the summer when this program is not available?**

Probe: If you weren't in this program, what would you be doing in the summer?

**13. Do you have ideas about how this program could be improved? Can you explain why you feel this way?**

*Thank the students for participating.*

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